REPORT
OF
COMMISSION

Appointed in 1936 to inquire into the various phases of

Irrigation Development In Alberta

REPORT
OF
COMMISSION

Appointed in 1936 to inquire into the various phases of

Irrigation Development In Alberta

THE LETHBRIDGE HERALD

to the remaining questions, as set out in the Lethbridge Northern report are applicable equally to all projects, unless otherwise indicated. Before dealing particularly with the question of ability to pay certain general considerations may be pointed out.

It is apparent that the "potential possibilities for the production of crops and livestock" depends upon many varying conditions and upon many variable factors. Some of these are as follows:—

(a) The quality of the soil. This varies much in the various parts of each district. Fortunately a soil survey has been made of the Lethbridge Northern project and the commission think it wise to base its findings on the ratings thus established. Further reference will be made to these ratings but it may be said here that the survey was apparently very thoroughly made and the results seem to be generally satisfactory.

(b) The production of specialized crops and the elimination of straight grain farming.

(c) Proper rotation of crops.

(d) Maintenance of high soil fertility by recognized methods.

(e) The skill, business methods and willingness of the individual farmer.

It follows from these considerations that the yields obtained from any particular parcel or indeed from any particular district are not by any means an exact criterion of what the farmer can pay. By using the land ratings as a basis it is possible to provide in some reasonable measure for the variations in the quality of the soil. But there are no scientific ratings in respect of the other factors and resort must consequently be had to the principle of averages. The views of the farmer himself as to the value of his land based upon its productivity is of much value. The commission has endeavored to obtain an average of these views. The annual production of the farms is a fair criterion. The commission has endeavored to arrive at an average ability to pay based upon average production — having in mind average capacity and average conditions.

Then, of course, it can never be forgotten that the most important factor in determining "ability to pay" lies in the future beyond the control of man and outside his ken. Frost and hail may take their toll but assuming that other conditions are not wholly perverse, markets and prices more than any other single factor determine the farmer's ability to pay. In these matters again we can only assume average conditions, that is to say, those conditions which we sometimes describe as "normal."

In 1925 Prof. John A. Widstoe, at the request of the then premier of Alberta, made an investigation in the affairs of the Lethbridge Northern Irrigation District and made a comprehensive report thereon. In October, 1930, a commission consisting of Prof. M. L. Wilson, chairman, W. H. Fairfield and L. C. Charlesworth was appointed to enquire into and report upon the cost of production and irrigation in all those projects whose debentures had been guaranteed by the province. This included the Lethbridge Northern project. A perusal of the questions referred to the present commission indicates that the range of its investigation is much narrower. The Wilson commission presented a very full and illuminating report dealing mainly with questions which are outside the scope of the present commission. At the close of its recommendations, however, the commission added the following paragraph:

> "To give a general idea of the effect of these recommendations it may be said without going into detailed explanations that it will make the price of average irrigable land in the Lethbridge Northern District including water right something less than $35.00 per acre and the price for the water right alone on average land will range between $18.00 and $28.00 per irrigable acre."

It will be observed that at the time the Wilson commission pre-

sented its report it had no reason to believe that the years preceding the report were in any way extreme nor could it possibly foresee the disastrous years that were to follow. The present commission investigates conditions at the close of six years that stand out clearly defined as the worst six years Canada has known. It would be dangerous to interpret the next six years in terms of the past six years. It would be equally dangerous to assume that a period of great agricultural prosperity has now set in. We can base our conclusions only on what we deem to be normal, having in mind the deplorable set-back experienced by the farming population from which recovery even under the best conditions will necessarily be slow.

Lethbridge Northern Irrigation District

Question 1: The value of land with water right as determined by the potential possibilities for production of crops and livestock on irrigable land of good quality.

Question 2: The ability of farmers of average attainments in resources, industry management and agricultural knowledge, to pay for land with water rights, having regard to economic conditions over a period of years.

Land Values In the Lethbridge Northern As Determined by Evidence of the Farmers

The commission obtained evidence from farmers of different parts of the Lethbridge Northern Irrigation District regarding the value of irrigated and dry lands and the productive power of their soils. In many instances the farmers do not keep books and could give yield data only from memory. There were, however, a number of cases where the farmers had kept books and were able to supply their results over a period of years.

A summarized statement of the evidence is shown below in the table (for details see appendix).

Average land values and crop yields for the Lethbridge Northern Irrigation District as shown by the farmers evidence.

Value of land		Yields of wheat		Irrigated			
Land plus Water	Dry Land	Irrigated Land	Dry Land	Oats	Alfalfa	Beets	Ratings
$	$	bu.	bu.	bu.	tn.	tn.	%
18.56	8.53	25.7	10.6	41.7	2.2	12.8	68.7
Number included in average							
33	21	38	11	29	31	18	55

Thirty-three farmers supplied us with their estimates of land values. These estimates of the values of the land with water varied from $7.00 to $35.00 per acre with an average of $18.56. The majority of the estimates, however, ranged between $15.00 and $25.00 per acre. For the dry lands the values ranged from $5.00 to $20.00 with an average of $8.53 per acre.

Another way of arriving at the value of the land is to use the yield data supplied by the farmers, and then determine the crop share which the farmers are able to pay and from this arrive at the value of the land.

The farmers testimony showed that the yields of wheat under irrigation varied from 12 to 40 bushels with the general average being 25.7 bushels. The average yield of oats is also shown at 41.7 bushels; that of alfalfa 2.2 tons and beets 12.8 tons. The average yields of wheat for the dry land was 10.6 bushels.

From evidence obtained from officials (see appendix) covering 114 parcels of land for the years 1934 and 1935 the average production for the various crops was, wheat 25.1 bushels per acre on irrigated land and 10.5 bushels on dry land, oats 43.4 bushels per acre, alfalfa 2.09 tons per acre, beets 10.9 tons per acre. These yields are almost identical with those obtained from the farmers' evidence.

From the testimony submitted it would seem to the commission that the average farmer in the irrigation districts could pay 1-5 of the crop insofar as the grains and hays are concerned, and 1-10 of the root crops. The pasture crops should stand a charge per acre equal to the

hay crops. This crop share is in keeping with the share specified by officials as their collective opinion submitted January 31st, 1935, and amounts to $2.50 per acre based upon 60 cents for wheat, 40 cents for barley, 30 cents for oats, and $5.00 per ton for alfalfa, and is in addition to municipal and school taxes.

Later, on November 19th, 1936, it was stated that the average irrigated land could pay $2.20 per acre when 1-3 was hay, 1-3 grain and 1-3 pasture, not including any revenue from the pasture. This means that each acre of hay and grain would return $3.30 when 1-4 of the hay and 1-5 of the grain was the crop share used.

The commission is of opinion that this crop share (1-5 of grain, hay and pasture, and 1-10 of roots) should take care of the maintenance and service charges in connection with delivering the water, and any remaining amount should then be applied to take care of interest and capital charges.

The average price figures for the various crops over a long period of years could safely be put at 70 cents for wheat, 30 cents for oats, 40 cents for barley, $7.00 for hay and $6.00 for beets. If we take the various crop shares and prices above suggested this would mean $3.57 for wheat, $2.49 for oats, $3.08 for hay and $7.74 for beets per acre. The figure for beets may be somewhat high owing to an unusually good year and possibly it might be safer to use a figure of about $6.00 per acre. Again some of the farmers, for various reasons, will not produce beets. Thus it would seem safer to take the figure for the wheat, oats and hay, assuming that 1-2 the land will be in wheat, 1-4 in oats and 1-4 in hay or pasture. According to this assumption the crop share would equal $3.16 per acre.

The service charges for water on the Lethbridge Northern Irrigation District should be about $1.25 per year. This would leave approximately $1.90 to be applied on interest and principal. If this figure is amortized at 5 per cent. interest it amounts to the following:—

$1.90 for 15 years	$19.72
1.90 for 20 years	$23.67
$1.90 for 25 years	$26.77

The commission might be justified in accepting the testimony of the farmers as satisfying their requests, and might proceed to establish land values with this testimony as a basis. It must be remembered at the same time that the farmer is personally interested in this connection, and as a result it might be fair to say that the figures supplied by the farmers should not be considered as placing a land value or a crop production at too high a figure, and provided such figures were used the farmer should then have no objection to the values thus established.

Combined Value of Land and Water

The average rating for the 55 parcels of land included in the table is 68.7%, whereas the average for the entire Lethbridge Northern Irrigation District is 65.6. Thus a fair cross-section of the general quality of the lands of the Lethbridge Northern Irrigation District has been used to obtain data for yields and land values.

As already shown the value placed on the land by the farmers is $18.56 per acre. From the farmers estimates of their crop yields by using 1-5 crop share the farmers could pay out a figure of $19.72 per acre over a period of 15 years, or if the time were extended to 25 years it would place a value on the land of $26.77. Thus it will be seen that the figures arrived at by both methods tend to establish approximately the same value for average irrigable lands. It should also be mentioned that the average land and water values as set by various officials were as follows: $9.84, $16.66 and $25.00.

While many factors enter into the question of land values, the productive power of the land should be the determining factor. The crops produced, however, are to a large extent dependent upon the ability

and industry of the individual farmer, and in this respect the commission had to be guided by the testimony of the farmers and that of the officials administering the projects. From all the information available it would seem fair to place the average value of land with water in the Lethbridge Northern Irrigation District at $20.00 per acre for 70% land.

The Wilson commission made a reduction in the then existing land values of 36%. It was thought that this reduction would enable the average farmer to pay out. The present suggested reduction amounts to a reduction of 43% from the prices suggested by the Wilson commission.

Land Ratings

The lands of the Lethbridge Northern Irrigation District have all been classified with respect to soil, topography, location, etc. When the soil was considered less than 25% it has been classed as non-irrigable, likewise when the general slope exceeded 7% it has been excluded even though the soil itself is of good quality. The location or distance from market has been expressed as percentage, and in addition a water factor area rating has been applied. The combined results of these various ratings give the final rating for each parcel of land. For example two parcels have the following ratings:—

Irrigable Area, acres	Soil %	Topography %	Location %	W. R. Area Factor %	Final Rating
76	84	88	86	101	65
141	64	73	90	102	43

In the first case the land and water would be valued at 65% and in the second case at 43% of the value of 100% land. Thus the final rating will determine the actual value of each parcel when the price of land of a given quality is set.

Relative Land and Water Values

The combined land and water value consists of the value of the land itself, plus the value of the water. Any two parcels with water and similar regarding soil, topography and distance from markets should have the same combined value no matter where they may be located in the Lethbridge Northern Irrigation District. However, the relationship between land and water will differ in the different parts of the district. These relative values for the different parts of the district were defined by the Wilson commission as follows: " . . . in the West end or Macleod area, that is in Ranges 25 and 26, the water right value should be taken as 4-7 of the total combined value of land and water as determined for the particular parcel; in Range 24 and the west half of Range 23, the water right value is to be taken as 5-7 of the total value; from the centre line of Range 23 east the value of the water right is to be taken as 6-7 of the total value. These are arbitrary figures, but it seems quite necessary to establish a definite method of determining the water right value and the commission wishes to point out that these relationships were only decided upon after most careful consideration. We believe that the resulting determination will produce as fair and equitable values as can possibly be expected and sufficiently close to true facts for all necessary purposes of administration."

The farmers seemed to have no serious objections to the above proportionate land and water values, and this commission is of opinion that it should be maintained in determining present values of land and water rights in the various parts of the district.

Official Opinion

The evidence with respect to ability to pay thus far quoted has originated mainly from the farmers themselves. In order to get the opinions of those most able to and best qualified to give opinion of value due to their experiences in the administration and development of irrigation communities, the commission thinks it advisable to quote from certain reports submitted and evidence given by various gentlemen who have been in positions of

authority in the administering of several different projects in Southern Alberta. As we shall submit testimony dealing with the C.P.R. Block at Lethbridge and as owing to its location it is more comparable to the situation of the Lethbridge Northern Irrigation District than any other in Alberta from which we might make comparisons, we now desire to submit statements from the evidence of Dr. William H. Fairfield, Superintendent of the Dominion Experimental Station at Lethbridge. This station is situated in the above mentioned C.P.R. Lethbridge project, and Dr. Fairfield is the owner of irrigated farms which he is operating in that vicinity, and was a former member of the Wilson commission, which made an investigation of the Lethbridge Northern and the United Irrigation District in 1930.

The chairman put this question: "Now, we are endeavoring to find out what is an amount that these farmers can reasonably pay or can reasonably be expected to pay, not the high-grade farmer, and, of course, not the unfit, but the average farmer of average abilities and surrounded by ordinary, average circumstances and with average production from year to year; what can he pay?"

Answer: "I think the value of irrigated land at the present time varies all the way from ten to fifty dollars depending on a number of factors, the quality of the land and the topography, distance from the market, closeness to gravelled highways. There is lots of land, irrigated land, in my judgment, that would be far cheaper at forty dollars an acre than other irrigated land would be at twenty dollars an acre."

Question: "Take the land involving all the composite factors you have mentioned, and what would 100 per cent. land be worth?"

Answer: "Well, I suppose according to the statement I have just made, that one hundred per cent land would be fifty, but I don't know. I would like to give a little consideration to that before I offered that opinion."

Answer: "Oh, I think at the present time if you are going to take fifty dollar land it would have to be pretty close to one hundred per cent of that" (rating).

Dr. Fairfield came to Lethbridge in 1901 and bought land of the A. R. & I. the first year of the delivery of irrigation water. He farmed that place for six years when he was made Superintendent of the Dominion Experimental Station. He still owns that farm and one other.

Question: "What would lands of good quality produce under irrigation dealing with the main crops that are produced, or that you think should be produced under irrigation. The grain crops of course, would be wheat, oats and barley, and then the hay crops, alfalfa and pasture, and then the intertilled crops, something like beets, potatoes or corn, or any other crops that you should care to discuss"?

He submitted an Exhibit 62, which set forth results over a term of years at the Station of the production of various crops.

In speaking of these results he said, "I realize that an ordinary farmer on fifty or one-hundred or two hundred acres could not be expected to obtain these results; but they run on for 24 years. Sir, and that takes in the vicissitudes of climate, and I think that an ordinary farmer should be able to get within about sixty per cent of this, fifty or sixty per cent".

"There has been nothing done on this that wouldn't be done, so far as cultural practice is concerned, but what the ordinary farmer could do."

Spring wheat 51.7 bu., oats 95.1 barley 59.4, alfalfa 3.38 tons. On land cropped continuously. Beets 14.11 tons. Irrig. pasture carrying capacity 1.75 mature animals per A. for 4 summer months.

To get good results it is necessary to keep about ¼ to ½ of the farm in alfalfa and have a row crop take the place of bare fallow and do this under a system of crop rotation.

Question: "What portion of the crop which you irrigated could the farmer pay for the water"? "Including both charges, the annual charge for the operation and maintenance, and the balance, whatever it might be, to apply on capital cost"?

Answer: "I believe that a man that is a good farmer, some managerial ability, can give one-third to one-quarter of his crop, and if he is a good irrigation farmer, and still be able to make a fairly satisfactory living. This charge it appeared would include taxes in the ⅓ or ¼ portion of crop so applied. That is my considered opinion"—based on his entire experience of some 30 years.

Question: "Now, what does the very finest farmer produce on the finest land? What can he afford to pay"?

Answer: "I think that man can have no trouble at all with the fifty dollar land". (on the Lethbridge Northern).

Question: "Take average land, that is land that is neither 100 per cent. or useless land, but lies fairly between the two, and put upon that land a farmer who is not able to employ the very best methods, nor bring to bear upon it the highest intelligence, but is an ordinary farmer placed upon average land, and under the conditions which we have a right to look forward to during the next ten years, good or bad, we know not, and we can only gauge them by going back over the past; what can he afford to pay for that land"?

Answer: "Well, under present economic conditions, I suppose that twenty-five dollars ——— (P. 2313 completes answer) "Well, I think the land that you are speaking of, I don't think twenty-five dollars an acre would be very far wrong. It is hard for me to say that." (And completing on P. 2314).

Question: "Does that include the land and the water right"?

Answer: "Yes, the land and the water right," continuing, "I would like to make this observation that I will be very much disappointed and surprised if in ten years from now that price won't be ridiculously low."

"Now, I think, from my observations—I have been here over a generation now in Alberta—it will take a generation before we can expect the farmers to begin to make the best, and realize on the asset of the irrigation. What they have been doing in the past to a large extent is in raising grain and raising stuff in competition with all the Canadian Prairies, and the irrigation has been just a load and a liability on them. When the change comes about, I think that irrigated land, the value of it, and the value to the state in having that will be realized, and will be shown in a way that we can't appreciate at the present time, or the public doesn't appreciate at the present time"

Augustus Griffin, Chief Engineer, Department of Natural Resources, Canadian Pacific Railway.

Question by Chairman: "Let me put the question to you this way. Suppose you were sitting on this Commission, as you well might be instead of myself, and you had to answer this question, with all the knowledge you now have, not only the knowledge we gained at the meetings you have attended, but all the knowledge you have gained in your lifetime of experience in irrigation and confining your answer to the Lethbridge Northern, in which you are not interested at all, how would you answer that question as to what the farmers in the Lethbridge Northern—the average farmer—is able to pay for average land under existing conditions, present and future?"

Answer: "Perhaps I can approach the answer this way: I believe if there had been the will to pay that payments on the whole, with some exceptions perhaps, could have been paid under the plan set up by the Wilson Commission."

Mr. Charlesworth: "The Wilson Commission fixed a maximum value of $50.00 an acre and all the other values were fixed by the ratings

that had already been made. The net result was an average value throughout the District of land with water right of about $33.00 an acre."

Question: "It just appeared to me that you meant to convey the Wilson Commission finding would be henceorfth possible for those men to meet if conditions remained as they were and as you expected them to be for the next few years".

Answer: "If you were to clear away the 25% of the inefficient and you could replace that 25% with a fair average of the upper 75%".

Answer: "Having qualified any opinion that I might hereafter express on all these things, ——— P. 2353 "It was my opinion that the $25.00 would be the maximum price for land (and water right) and there should be a grading from these down according to quality as best can be made with that base price".

on several occasions from hail damage, which losses contribute to their present difficult position, to no inconsiderable extent.

But if the beet acreage had been distributed equitably it would have been practically 20 acres on each farm. This is such a distribution as the officials of the project have had in mind as an ideal to strive for to insure the most beneficial allotment of acreages in the best interests of the project settlers as a whole.

Then on the average farm on the Lethbridge Northern of 160 acres, 107 irrigable, 100 acres producing crops in rotation, 7 acres in building site, gardens, pasture, etc, we would have 20 acres growing beets valued at $1.233.28.

The other 80 irrigable acres if apportioned in crop as Mr. Eisenhauer's table indicates would be as follows, omitting fractions:

Year	Parcels	Acres	Wheat	Oats	Barley	Beets	Hay	Receipts
1934	120	10,706	22.2	40.8	28.3	11.6	2.08	$233,792.10
1935	108	10,976	28.0	46.0	36.9	10.65	2.10	$241,031.20
Avrgs.	114	10,841	25.1	43.4	32.6	11.12½	2.09	$237,411.65

A report of acreages, crops, yields, selling prices and gross returns from tables was submitted by Mr. E. E. Eisenhauer, Agricultural Expert employed in an advisory capacity on the Lethbridge Northern. The information is from the records of the Irrigation District and supplements the figures already given.

Mr. Eisenhauer presented to the Commission a comprehensive brief dealing with the present conditions of the farmers on the Lethbridge Northern and as to the means of improving those conditions that might be employed. The complete report is included in the Appendix. The Commission believes it to be a very informative document. It calls especial attention to severe losses suffered by the farmers there

Average acres in beets, 2,125, yield 11,125 tons, worth $131,036.00.

Average gross per acre $61.66 2-5, cost per acre $41.85, profit $19.81 2-5.

Total average acres 10,841, minus 890 not showing returns 9,951 acres: 9951 minus average beet acreage 2,125 leaves other crops 7,826 acres. Less an average of 699.5 acres in dry land wheat, oats and barley, 71,265 acres in irrigation crops marketed. Gross return for 7,826 acres is $106,375.65 or $13.59⅓ per acre As approximately ⅓ of grain and hay considered net $4.53 profit per acre, 19.6% of entire acreage was in beets but the average beet acreage per farm is not shown. Nor do we know how many parcels grew no beets.

Wheat	47%	38 acres	25.1 bu.	65c—	$ 619.97
Oats	15%	12 acres	43.4 bu.	30c—	$ 156.24
Barley	8%	8 acres	32.6 bu.	40c—	$ 104.32
Hay	25%	20 acres	2.09 ton	$6.50 —	$ 271.70
Potatoes	3%	2 acres	3.75 ton	$8.50 —	$ 63.75
		80 acres	Total		$1,215.98
Beets		20 acres	Total		$1,233.28
		100 acres	Gross production		$2,449.26

Note: In addition to the earning ability of the 100 acres we have just demonstrated there is an opportunity to increase gross income by proper use of the part of the 7 acres, not used as a building site. In addition to that there is the revenue that should come from some use of the 53 acres of dry land.

This estimate made by the Commission using Mr. Eisenhauer's figures as basic information from which to arrive at above hypothetical results is for purely informative purposes.

The Commission has also given careful attention to Mr. Sutton's evidence. The Commission think it would be dangerous to substitute a bushel unit for a money standard in fixing the purchase price to be paid. If the proposal means that the purchaser should pay a fixed number of bushels of wheat or its fixed equivalent in other grains, then both parties would be gambling on the future price of grain If the price of grain goes up beyond the price used as a basis to compute the purchase price of the land the farmer would be dissatisfied because he would in fact be paying more than the price in terms of money. If the proposal means that the price be fixed in terms of money but that the farmer should be compelled only to deliver a fixed number of bushels each year then the crop share basis of payment herein suggested fairly meets such a proposal.

As pointed out above the Commission think it would not be reasonable or proper to fix the value of land or the ability to pay solely or mainly on the results of depression years. The Commission is, however glad to note that the average value fixed by those who may properly be regarded as experts in irrigation farming, including Mr. Sutton, approximates closely to the value fixed by the farmers themselves as well as to the value based on the farmers' evidence concerning his ability to pay as above worked out.

Question 3: The conditions imposed by the agreements for sale of land with water rights and the policy of collections thereunder.

Question 4: The conditions imposed by water agreements and the policy of collections with respect to water rentals and water service charges.

Inasmuch as the Commission recommends that the purchase price of land and water rights be consolidated in a fixed sum, which will be collected in instalments as above set out, Questions 3 and 4 can be answered together.

No complaints were made to the Commission concerning any specific provision in the agreements now in force nor was it suggested that any particular provisions should be added. If separate forms of agreement are now in use with reference to the sale of land and of water rights when such sales are made to one individual, then two forms can easily be consolidated by the district's solicitor. The existing statutes now seems to provide ample remedies for default.

With reference to the policy of collection we have already indicated that collections should be made on a share crop basis. The annual due dates of the instalments of the purchase price should correspond with the approximate time when the share of crop or the proceeds thereof are available. The amount

collected should be applied, firstly, in payment of the annual water service charge, secondly, in payment of the instalment of interest on the purchase price, thirdly, on the instalment of principal then due. If in any year the proceeds of the share of crop exceeds the amount of the total payments above mentioned, then the amount of such excess should be placed to the credit of the purchaser, and held in reserve. If in any year the share of crop produces less than the amount due then the deficiency can be made up out of the reserve. The purchaser should be allowed interest on his reserve at the rate of 5% per annum. This we think would have an entirely good effect because in a year of poor crops or poor returns the purchaser would be relieved of the worry which results from default.

The Commission is of opinion that it has recommended in this report a reduction of the price of land with water to a point at which any farmer of average or even slightly less than average attainments in industry and skill can pay over a period of years. It follows that the burden of such reduction must be borne by the province as a whole, but this reduction is predicated on the assumption that the plan, if adopted, will be rigidly carried out, so that no further loss or expense may be incurred by those who are not primarily liable for any of the indebtedness.

The Commission has been made fully aware that irrigation authorities now agree that the full capital cost of an irrigation project should not be charged up to the lands immediately benefitted. The conversion of a non-productive arid area into lands intensively farmed benefits not only the irrigation farmer but also the community, the Province and the Dominion, as well as many private enterprises such as railways and factories.

Collections should be rigidly made. It may be of course that owing to some very exceptional circumstance a purchaser would suffer acutely if the entire crop share were collected in a particular year. In such a case the management would, in its discretion, stay its hand. But if a purchaser is manifestly a misfit or if he does not adopt reasonably proper irrigation methods, as distinct from dry farming methods, and as a result is in default, or if he is in default for two, or at most, three years then he ought to be removed, not only in the interests of the district but in his own interests as well.

If one purchaser does not pay then in some way or another some of the burden falls on the other farmers in the district. It would be most unfortunate if a great business project, such as the Lethbridge Northern Irrigation District, in which the interests and hopes of so many people are wrapped up, should be allowed to be converted into a partial relief organization. The removal need not be harsh but it ought to be certain, and no considerations of sympathy, and no personal or political pressure should be permitted to interfere.

Question 5: The effect and application of "debt" legislation with respect to water rentals and water service charges and the question of priority for such charges as related to the farmer's creditors

If new contracts are entered into with intending purchasers then no existing debt legislation will apply to the contracts. If a reduction such as is now recommended is made then this Commission is of opinion that these contracts so reduced should be exempted entirely from any future debt legislation, whether such legislation affects substantive rights or merely procedure to realize.

Matters of "priorities" open up many highly contentious questions They involve the relative merits of various classes of debts. In a sense all just debts are meritorious. The policy of the law has always been against preferences and priorities and only in exceptional cases have legal priorities been given. However, crops cannot be produced without

water and unless the annual water service charge is paid the supply of water cannot continue. We think, therefore, that priority should be given to this charge over all other charges and debts including municipal taxes.

Question 6: The question of rights of distress for non-payment of charges for (a) water rental or water service; (b) taxes; (c) land and water rights.

The question of distress is a matter between the district and the water user and is distinct from the question of priorities. The Commission is of opinion that, having found that the water user can pay 1-5 of his crop annually to the district, the right of distress ought to exist in respect of that crop share. We think this is proper even though this share is intended to include not only the annual water charge but the interest on the purchase price of his land and the instalment of principal as well. This right is, we think, necessary to the proper working out of the scheme as above outlined. But as between the district and other creditors we think the district should have priority only as to the amount of the annual water service charge.

The rights of the Municipality as to the collection of municipal taxes is governed by The Municipal District Act and the Commission does not think it wise to make any recommendations except as to the priority given to the annual water service charges as above set out.

THE UNITED IRRIGATION DISTRICT

Question 1: The value of land with water right as determined by the potential possibilities for production of crops and livestock on irrigable land of good quality.

Question 2: The ability of farmers of average attainments in resources, industry, management and agricultural knowledge, to pay for land with water rights, having regard to economic conditions over a period of years.

The United Irrigation District was started about the same time as the Lethbridge Northern Irrigation District. During the first years but little water was applied to crops in each of these districts. In most respects the United Irrigation District could be compared favorably with the western part of the Lethbridge Northern Irrigation District There is, however, one decided difference in that the water service charges for the United Irrigation District will in general be fairly low (about 50 cents per acre) as compared with $1.25 in the Lethbridge Northern Irrigation District, and upwards of $2.00 in some of the other irrigation districts This places the United Irrigation District in a very favorable position in so far as service charges are concerned, and would make it possible for this land to meet higher capital costs with the same efforts exerted by the farmers.

The evidence obtained from the farmers in the United Irrigation District shows a very dismal picture of the benefits to be derived from irrigation. It is impossible to analyze the yield data for this district as thoroughly as could be done for the Lethbridge Northern Irrigation District. The Commission in this respect is dependent primarily upon the brief submitted by Mr Asplund (see Appendix . . .), in which he shows yield data for the entire district covering the years 1931 to 1935 inclusive. During these years the prices were extremely low, and in addition the district suffered very severely from grasshopper plagues during two of the years. It should furthermore be stated that not all the land was cropped.

During this five year period from 1931 to 1935 the gross revenue is not given, but the average annual collections were $14,567.00 which amounts to slightly more than 40 cents per acre for the irrigable land. The amount collected represents in most cases 1-6 crop share; however in a few instances ¼ or ⅓ crop shares were taken. If the above conditions represents the ability of the land to produce, then the entire

project must be either discontinued or considered as a permanent relief project.

As the result of yield data it is shown that the average production of wheat would possibly be somewhere in the neighborhood of 13 to 15 bushels, considered on the basis of the entire irrigable area This yield is only about 60% of the yields reported from the Lethbridge Northern Irrigation District. In the opinion of the Commission the productive power of the United Irrigation District is in excess of that shown by the evidence.

However, a somewhat different picture is shown when the returns for the 7 year period (1924 to 1930 inclusive) are considered. For this period no complete yield data were obtained, but the average gross revenue from the United Irrigation District amounts to $467,153.00 per year with an average annual collection of $35.023.00. During this 7 year period the amount of land actually irrigated varied from about 1500 to about 10,800 acres with an average of about 4,900 acres. This was a period of fairly good prices and fairly good yields. Thus from the entire district consisting of 56,000 acres, of which 35,000 acres are classed as irrigable, the collections amounted to the equivalent of only $1.00 per acre for the irrigable area. These collections during the 7 year period would amount to about 1-13 crop share.

Land and Water Values

The soils in the United Irrigation District in general are of high quality, and owing to the better rainfall of this district the dry land soils are more valuable than the average soils in the Lethbridge Northern Irrigation District.

The Commission is unable to see why the productive power of the soils within the United Irrigation District should be lower than they are for the Lethbridge Northern Irrigation District, and over a period of years think the ability of the farmers to pay in the United Irrigation District is equal to that of the Lethbridge Northern Irrigation District.

The evidence of the farmers in general seemed to indicate that they valued the land with water at $10.00 per acre. They further stated that they could pay at the rate of $1.00 per irrigable acre per year. This rate of $1.00 per acre per year was supposed to be 1-6 crop share and to take care of water service charges, municipal, school and other tax, and in the event that there was anything left over this could be applied on interest or capital charges. Both the land values and the crop shares suggested by the farmers seem unusually low when it is known that more than 10% of the lands have been paid for in full and other lands now paying ⅛ to ¼ share are in good standing, and furthermore crop shares and land prices between parties outside the boundaries of the district are higher than the 1-6 figure or the $10.00 value.

In answering questions 1 and 2 dealing with the combined value of the land and water and the ability to pay as determined by the productive power of the soil, the Commission thinks that the United Irrigation District in these respects is in the same position as the Lethbridge Northern Irrigation District. That is water should be worth 4/7 of the combined value of the land and water, and the dry land worth 3/7 of this combined value. It is recognized that the dry land is fairly productive in the United Irrigation District and that the water service charges are relatively low. These two factors would seem to make it easier for this district to meet payments than for other districts, but taking all things into consideration the Commission is of opinion that the values for similar ratings of soil should compare with the values set for the Lethbridge Northern Irrigation District. This would mean that 70% land valued at $20.00 for both land and water should consist of $11.43 for water and $8.57 for land per acre.

The debts against the land in this district amount to about $12.00 per acre including the capital water charges, and it would seem that

this could be met from the productive ability of the district.

A quarter section of land with 107 acres irrigable at a rating of 70% at $20.00 per acre would amount to $2140.00 value, where the land value was 3/7 of the combined value the remaining 53 acres of dry land at a value of $8.57 per acre would amount to $454.74, or the combined land and water on this quarter section would be $2594.74.

Rates of Payment

In answering questions 3 and 4 dealing with the question of rates of payment, the Commission is of opinion that the conditions suggested for the Lethbridge Northern Irrigation District are equally applicable to those in the United Irrigation District, and feel that the crop share should be 1-5 of the grain and hay crops with the pasture to be paid on a per acre basis equal to the production of hay crops and the root crops to be 1/10 share.

Since the above schedule is in fairly general use in other districts and has been worked out, keeping in mind the farmer who is compelled to grow chiefly grain and hay, this should be fair and possible for the United Irrigation District.

The average size of the farm is about 300 acres of which about 200 acres are irrigable. This unit is rather large for the farmer, without help within the family, to properly irrigate and in many cases it might be advisable to reduce the size of the unit, thus making it possible to work and irrigate the land more thoroughly and consequently increase the per acre production.

On the whole the commission is unable on the evidence to differentiate between this District and the Lethbridge Northern Irrigation District with respect to land values and the ability of the farmer to pay. The conclusions reached in regard to the Lethbridge Northern District as above set out will, therefore, apply to the United Irrigation District.

NEW WEST IRRIGATION DISTRICT

An introductory statement regarding this District may well be made by quoting from a brief presented to the Commission by its secretary:

"The project of the New West Irrigation District is situated in the west half of township 14, range 16, west of the 4th meridian. It contains forty-eight quarter sections. 7,680 acres with an irrigable area of approximately 4,500 acres. The majority of this land was homesteaded as far back as 1903 and was farmed under dry land methods until the year 1924, when irrigation was first applied. The system was constructed in 1923. The government of the Province of Alberta guaranteeing the debentures, which amounted to $209.500 bearing interest at 5½%. These were issued on July 1st, 1923, and were disposed at $6,000.00 premium.

"The district purchases its water from the Canada Land and Irrigation Company at a cost of $1.25 per irrigable acre, or a total of $5,-625.50 to be paid on or before the 1st day of April annually.

"Sufficient funds were raised from the sale of the debentures to enable the District to carry on in the year 1924, without having to make any levy. In the year 1925 the first levy of $2.25 per irrigable acre for water service charges was made. In 1926, and for the five years following, each irrigable acre was assessed for both water right payment (i.e. the debenture interest and charges) and water service charge (i.e. cost of water, maintenance, repairs and operation). The irrigation rate levy for those years was $4.55 per acre.

"It was in these years the majority of the farmers lost their holdings through rate enforcement proceedings for non-payment of rates. Today only two of the forty-eight parcels in this district are in the hands of private ownership. The balance are now registered in the name of the New West Colonization

Manager, some having been transferred under "The New West Irrigation District Colonization Act." The majority of said lands are now under lease to tenants".

The secretary likewise submitted the following tables of production for the past five year period:

	Average yield per acre	Gross Revenue per acre
Wheat	15.8 bu.	$8.24
Oats	29.68 bu	7.15
Barley	22.92 bu.	6.06
Alfalfa hay	1.55 ton	8.86

Total value of all crops and livestock sold:

Year	Gross Revenue	Acres Irrigated	Av. return Per acre
1929	$65,213.30	3182	$20.47
1930	20,091.00	3214	6.25
1931	27,650.55	3156	8.76
1932	12,829.65	2125	6.04
1933	13,229.30	1691	7.22
1934	17,548.60	1712	10.25
1935	31,563.35	2066	15.28
Averages	$26,877.96	2449.6A	$10.97

As the cost to the district for its local distribution of water is 73.5 cents and payment to Canada Land and Irrigation Company is $1.25, the total service charge now is $1.985 or approximately $2.00 per acre per annum. This would leave an average balance then to the farmer during the above years of approximately $9.00 per acre.

As all but two of the present farmers are renters and not obliged to pay taxes this sum would go to them from production. The two land owners would have to pay taxes from their remainder.

However, since the Colonization Manager has held title to these lands there has been an arrangement made where the occupier of these lands turns over one-fourth of his crop production annually to the manager. This sum is applied to paying water service charges and taxes as far as it will go.

It should be noted that the records show that of the 4,500 irrigable acres in the district an average of only 2,449.6 acres have been producing for the past seven years or 54.4% of the irrigable area. The irrigable area is 58.5% of the whole area.

Manifestly the Colonization manager is receiving only a small sum as income from these lands each year and is obliged to carry almost the entire burden of annual cost in connection with debenture payments, interest on debentures and a portion of the arrears of water service charges.

The secretary estimated that the total carrying charge per acre in relation to the debt and annual costs would be at present $5.46.

The evidence was to the effect that generally speaking it was very good land, reasonably adapted to application of water. The land has been classified by governmental agency as provided for the Lethbridge Northern. Ninety per cent. of the original settlers have left. Some of the farmers seem to be of opinion that they had been **more harshly dealt with** than those on the neighboring Canada Land and Irrigation company's privately owned project. It was predicted that the present occupants of the land would abandon it immediately in event the delivery of water to the District should cease. The inference was that the bulk of them would then become necessarily recipients of government relief.

Apparently there have been no resale of lands since the recommendations of the Wilson Commission respecting these lands were put into effect.

Mr. Hays, General Manager of the Canada Land and Irrigation company stated that the receipt of the $5,600.00 water rental fee was of considerable importance to his company. He said the average annual cost per acre for delivering water to his entire project, including the New West District, was approximately $2.00 and that the New

West had been in a relatively favorable position when his company undertook to deliver it to them for $1.25.

There was some concern expressed as to seasonal water shortages and the need for additional storage for the particular use of this district. There had been some shortage of water this year. Perhaps unskilful and tardy use of water available was the cause of their lack of production. Most of the present farmers there are inexperienced in the use of water and possibly ill equipped to farm properly under irrigation.

The Commission is of the opinion that the same readjustments as recommended for the Lethbridge Northern District be made applicable to the New West District. We are of the opinion that the productive power of the soil is on a parity with that of the Lethbridge Northern in all its gradations. On that basis similar land values should prevail and similar terms of payment be made.

However, we believe that all of the New West area as respecting land values and water right values should be classified as the eastern most part of the Lethbridge Northern District.

Recommendations re New West District

Apparently it is difficult to find settlers for this isolated district at the present time. The Colonization department are at a considerable distance from it—about seventy or more miles. It lacks the services and facilities that the Lethbridge Northern and the United Districts enjoy.

As it is geographically and physically really a part of the Canada Land and Irrigation Company area, possibly it should become an integral part of that project by some arrangement between the government and the company. It could be administered more economically, and possibly more advantageously by the Canada Land and Irrigation Company's organization. It might be possible to make an arrangement that would relieve the government of a considerable burden and responsibility while at the same time be a helpful and profitable undertaking for the company without in any way being prejudicial to the best interests of the people on the land there.

CANADA LAND & IRRIGATION COMPANY

Question 1: The value of land with water right as determined by the potential possibilities for production of crops and livestock on irrigable land of good quality.

Question 2: The ability of farmers of average attainments in resources, industry, management and agricultural knowledge, to pay for land with water rights, having regard to economic conditions over a perod of years.

The evidence submitted by the individual farmers show considerable variation in yields, as for example wheat from slightly less than 20 bushels to 40 bushels. The average yields for the various crops per acre as shown by the evidence was about as follows: Wheat 26 bushels, oats 54 bushels, barley 35 bushels, and alfalfa 2.5 tons.

Mr. Hildebrand, President of the Contract Holders Association, which association represents about 50% of all the contract holders, in presenting the case of the farmers stated that the average yield of wheat had been about 20 bushels, but that with improved prices and farming methods the crop yields should be increased by about 25%.

From the records kept by the company during the 11-years (1925-1936) it was shown that the average yield of wheat per acre had been 21 bushels. Yields for other crops were similar to the figures above given.

The evidence clearly indicated that the acre yields for the entire project might well be greater than above indicated provided prices for farm produce improved, and provided further that greater efforts were exerted by some of the less efficient farmers.

The value of land and water according to the evidence of the farmers varied from $10.00 to $55.00 per acre with a general average of $28.00. Mr. Hildebrand places the value at $20.00 to $25.00 and Mr. Hays values the water right alone at $35.00 to $40.00 per acre.

Combined Value of Land and Water

According to the Company's records the average gross value of crops per acre for the 11-year period (1925-1936) was $16.27. During this same period the average price of crops per bushel to the farmer was as follows: Wheat 77 cents. oats 35 cents, barley 41 cents and hay $8.87 per ton. Much of the land was held under lease during this period on a rental equal to ⅓ or ¼ crop share. The returns to the company should therefore have been $5.43 or $4.06 per acre according to the crop share in operation. However, the actual collections averaged only $3.06 indicating that complete collections had not been made. The ⅓ or the ¼ crop share included all charges such as water services, municipal taxes, school taxes, etc. Any remaining moneys were to be applied on interest and principal except during periods when the moratorium was in effect. In cases where the occupant was a purchaser rather than a lessee he would no doubt be responsible for the municipal and school taxes outside the crop share. If this were the case the crop share should possibly be less than the ⅓.

The Company has been charging $1.50 per acre for water services, whereas the actual cost of this service has been about $2.00 per acre. This creates a serious problem for the Company and this difficulty is further accentuated when the full crop share is not delivered. In the past the full crop share has not been delivered as shown by the actual collections of about $3.00 per acre, whereas the proportion due amounted to $4.00 or $5.00 per acre. In order that the project be successful all farmers must manage the land efficiently and keep it in a high state of productivity as well as deliver the full crop share. Such farmers who are unwilling or incapable of doing this should, for the good of all concerned, be removed at earliest possible moment. The right to obtain possession of the land quickly and inexpensively when a water user is in default is of paramount importance to the Company and to other water users as well. Unless provision for so doing is made the delinquent water rates may soon reach such proportions as to endanger the continuity of the water supply.

All the evidence indicates that the land generally throughout the district is of the highest quality, and is well adapted to irrigation. Land ratings have been made by the Company which seem to be generally satisfactory to the farmers In the light of all the evidence submitted, the Commission is of the opinion that the Canada Land and Irrigation District compares favorably with other irrigation districts and that the land and water values should be similar.

The combined land and water values should be equal to that in the eastern part of the Lethbridge Northern Irrigation District, that is land with a 70% rating should be worth $20.00 per acre with the water right constituting 6/7 of this value and the land value constituting 1/7 of this figure. In coming to this conclusion the Commission is supported by the opinion of Mr Hildebrand who operates a large farm in the District. In addition to being President of the Contract Holders Association he has had a large experience in irrigation farming and has an intimate knowledge of the entire problem as affecting this District. He was asked by the members of the Association to place their problems before the Commission, which he did at considerable length and with marked ability. He expresses the view that $20.00 per acre would be a fair value for land in the District.

Appendix attached hereto sets forth a more extended statement of the situation with respect to this District as disclosed in the evidence.

A.R. & I. BLOCK

In as much as a good deal of introductory information concerning this project is given in the chapter on Water Shortage it will not be necessary to repeat that here. Consequently we may immediately present reports as production, land values, etc. It appeared that other than the acute problems of necessary water storage the people of this area had no problems that this Commission might be called upon to consider.

There were some special problems of finance that were presented to us by the three subsidiary irrigation districts to which the A. R. & I. system delivers water. But they can be taken up briefly in turn under their own descriptive headings. The management stated that there were 301 parcels of contracts of sale and 335 parcels of deeded land to which they were delivering water.

Major F. G. Cross, Superintendent of the Lethbridge C.P.R. Irrigation Block, submitted the statement of collections hereinafter set out made in the years 1934, 1935 and 1936, from accounts taken at random from their files, indicating as a probable average the amounts that farmers on their lands under contract of purchase, were able to pay on account during that period, in addition to the requirement that in most instances, they were to pay the taxes on that land. It will be seen that the average of the 12 accounts considered amounted to a payment of $2.76 per acre for the 3-year period and a payment of $3.10 per acre for the year 1936. These payments came from agreements these farmers entered into with the Company to deliver a crop share varying in amount from ¼ to ⅓ of the total production for these years, to be credited to interest and principal debt owing.

In the second group of accounts we have amounts paid per acre by 15 farmers on arrears of water rental accounts. These payments were made by individuals who had title to their lands and were applying a crop share for the liquidation of the water rental arrears. The average payment for the 3-year period per acre amounted to $1.60 and for the last year, 1936, the average was $2.77. These reports came from farms of various acreages from as low as 50 and as high as 300 in extent.

COLLECTIONS

1. Irrigable Land Contracts:

W.A.	Irr. area covered by W.A.	1934	1935	Value of crop share received by the Company per acre average 1936	3-Yr. period	1936
1487	269	307.50	Nil	722.00	1.27	2.68
1506	133	311.91	323.01	374.47	2.53	2.81
1548	225	192.75	512.10	550.66	1.86	2 44
1549	260	192.75	512.10	550.67	1.61	2.12
1517	75	273.14	517.25	370.03	5.15	4.93
1276	280	695.25	814.70	1,189.85	3.21	4.25
1363	147	941.39	740.98	424.51)	4.77	2.90
				beet cheque)		
				to come)	Ave. 2.91	Ave. 3.13
1527	153	104.15	291.37	458.50	1.86	3.00
1583	66	252.00	365.80	366.40	4.97	5.55
1595	191	803.74	786.30	547.50	3.73	2.86
1524	130	62.87	166.67	427.34	1.68	3.28
1518/9	104	Nil	129.95	45.75	.57	.44
				Ave. per account	2.76	3.10

In addition to the foregoing payments, accounts have been credited with rebates, in accordance with Company policy.

2. Deeded Land Water Rental:

614	300	Nil	750.00	1,295.65	2.27	4.32
416	100	Nil	186.05	321.80	1.49	3.21
527	150	Nil	Nil	664.81	1.47	4.43
570	300	900.03	Nil	300.00	1.33	1.00
678	150	81.13	300.00	600.00	2.18	4.00
984	160	340.01	210.69	564.16	2.32	3.52
985	160	340.00	210.90	564.16	2.32	3.52
632	140	Nil	260.00	357.65	1.49	2.55
513	150	219.35	326.00	257.50	1.78	1.72
596	150	Nil	468.74	614.80	2.41	4.01
130	50	Nil	Nil	100.00	.66	2.00
139	100	Nil	Nil	100.00	.33	1.00
190	75	Nil	Nil	399.90	1.78	5.33
989	159	110.00	773.52	Nil	1.85	0.00
1035	300	Nil	Nil	300.00	.33	1.00
				Ave. per account	1.60	2.77

In answer to the question "in that connection, Mr. Cross, would you be able to give us information as to how many of the people who are obliged under the contracts are meeting their obligations? That is, if they were to deliver a third of the crop or a fourth of the crop, how many are doing that?"

Answer: "In my opinion the contracts will probably be in fair average standing. There will be a certain amount of lame ducks and a certain amount of good farmers."

Question: "Efforts have been made looking forward towards that. (Storage of water on the St. Mary's River). It is just a hope at present. But what effect do you think a full delivery of water would have upon the project at the present time as to the stabilizing or possibly the raising of land values and the ability of those people farming there to meet their obligations as opposed to the present position they find themselves in?"

Answer: "Certainly it would be a material benefit, but as to what percentage, I cannot say. While there has been a general percentage of loss in crop due to shortage of water (this year), I cannot very well estimate it. Certainly if more water had been available there would have been much more production."

Question: "Could you give us an idea of the approximate sum stated on the face of the contract that these people were to pay for their land; that they are paying on their contracts now, where you have not sold the land outright?"

Mr. McCaig:

Referring to your memo of the 3rd instant, your LD15181, and the subsequent conversation which we had regarding this matter I am sending you herewith six statements picked at random covering contracts in the A.R. and I. Block which have been compiled in accordance with your instructions.

With regard to the latter paragraph of your memo, on lands under contract carrying a water right, it was the practice in 1936 to obtain a crop undertaking covering a one-third of the grain crop and one-fifth of the beets except in cases where the land had been sold under a straight beet contract which required delivery to the company of the total proceeds of beets from ten acres. In the case of leased land, we required a one-third share of the grain crop and I do not know of any cases of land under lease that carried an agreement with the sugar company, to grow beets. In the case of water agreements on deeded lands, we made the best arrangement possible having regard to the arrears of water rental but tried to obtain a special agreement to cover at least the equivalent of one year's water rental.

It should be noted that a lessee occupying a piece of irrigable land under lease with the company is not required to pay water charges.

H. A. Harvey.

Calgary, February 10th, 1937.

A.R. and I. 70

60 acres irrigable sold at $45.00 per acre	$2,700.00
95.20 acres non-irrigable sold at $10.00 per acre	952.00
Interest capitalized	86.20
Total	$3,738.20

Contract is dated 1st December, 1924. By the 1st of December, 1930, the contract had been overpaid, being one instalment ahead. By reason of concessions the contract is now in good standing.

The water rent was regularly paid to 1928. Water rent was in good shape as at 16th January, 1933, and there are less than two years water rent in arrears.

A. R. and I. 287

140 acres irrigable sold at $25.00 per acre	$3,500.00
20 acres non-irrigable sold at $25.00 per acre	500.00
Total	$4,000.00

This contract is in bad shape. At the end of 1936 the purchaser owes half as much again as he agreed to pay in 1917 when the land was bought. The contract was entered into on the 27th of September, 1917, and from the date of purchase to 1927 the purchaser only paid $99.85, namely, on the 14th day of May, 1921. Payments have been coming in better since the depression started. Purchaser's water agreement was in good shape until 1929 but has been badly in arrears thereafter.

A.R. and I 311

135 acres irrigable sold at $50.00 per acre	$6,750.00
20.50 acres non-irrigable sold at $50.00 per acre	$1,040.00
Total	$7,790.00

Date of contract 31st October, 1917. Nothing was paid on this contract from the 29th of September, 1920, to the 6th of December, 1927, when $500.00 was paid. The payments made since December, 1927, amount to $135.00. The water rent is badly in arrears and this purchaser owes double what he originally agreed to pay.

A.R. and I. 421

40 acres irrigable sold at $50.00 per acre	$2,000.00
40 acres non-irrigable sold at $50.00 per acre	$2,000.00
Interest capitalized	400.00
Total	$4,400.00

Date of contract 10th December, 1924. This purchaser was in good shape at the end of 1929, and water rent was also in good shape up to the end of 1931. As the result of rebates the contract at the end of 1936 was in pretty good shape. The water rent, however, has been allowed to become in arrears since 1931.

A.R. and I. 586

280 acres irrigable sold at $47.00 per acre	$13,160.00
27.04 acres non-irrigable sold at $47.00 per acre	1,270.88
Improvements	850.00
Total	$15,280.88

Date of contract 1st December, 1924. This contract was in good shape until the end of 1929, the payments being right up to date then. The contract is also in good shape as at the 4th of February, 1937, being in fact overpaid to the extent of $126.80. The water rent is two years in arrears, though it was paid up to date up to the end of the year 1931.

A.R. and I. 644

72 acres irrigable sold at $40.00 per acre	$2,880.00
32.95 acres non-irrigable sold at $40.00 per acre	$1,318.00
Loan	400.00
Total	$4,598.00

Date of contract 1st December, 1926. In this case, the purchase price has been reduced from $4,598.00 as of the 1st of December, 1926, to $2,889.10 as of the 4th of February, 1937. Water rent was right up to date as of October, 1930, and at the present time there is less than one year's water rent in arrears.

In submitting the evidence of the water users presented to the Commission at their hearings in the Lethbridge Northern area, such evidence having been given by the farmers directly interested and living on the project, we think it advisable to make some like comparisons with the evidence given by the farmers on the Lethbridge Block of the C.P.R. Irrigation Company. This, we think, of value because of the fact that this project was the initial project established in Southern Alberta for irrigation purposes, and because of that fact it has reached a higher state of development and is possibly enjoying greater returns from the use of the water, because of the longer period of time it has been in use and because of the greater experience thus gained by those farmers living on that land. So, in order to present definite information as to results obtained we shall set forth excerpts from the evidence given by individuals in our hearings in that area of Coaldale and at Lethbridge, and tabulated statement of yields, values, etc.

Lethbridge-Coaldale A.R. and I. Project

Value of Land

As just previously stated this area is a long established, thickly populated, well improved, irrigation district. It has the city of Lethbridge in its midst and several good sized villages. Over half the area is privately owned. The C.P.R. have contracts of sale or leases covering the balance.

We have had expressions of opinion about earning capacitiy of the land as applied to values, and a fixing of present values by individual farmers living there. There has been no complete submissions such as a crop census and crop returns in money therefrom. We have therefore nothing very definite in the way of statistics to establish an opinion as to value.

The density of population here influences values; the locations of farms as to nearness to the city or villages; locations as to good roads and gravelled highways, superior schools, churches and market places. The fact is that because of these advantages they have added value for permanent home sites.

We think we have learned that there is a greater average crop production here per acre by possibly twenty-five to thirty per cent. than on newer districts.

So it is our considered opinion, reluctantly expressed because of all these indefinitely determined influences acting upon values, that the average value of partially improved land here should be $35.00 per acre. The present value of buildings added to that figure would determine the total present value.

Ability to Pay

From submissions of records of payments by the C.P.R. Co. and the evidence of yields and returns by individual farmers, and all other sources of information submitted bearing on the subject we believe that the net average farm income is sufficient to pay the $1.00 per year water rental, the interest and a portion of the prinpical debt each year so that in a normal amortized debt paying period the contract will be paid out and title pass to the farmer purchaser.

Report of yields from seven farms in Coaldale and Lethbridge areas of C. P. Railway Block, for year 1936 representing 2314 irrigable acres.

Yrs.	Res.	Wheat	Oats	Braley	Alfalfa	Beets	Corn	Land Value
1	30	21.44	26.34	31.70	2 ton	11 ton		$50.00
2	16	30.00	55.00	40.00	1.66	11		50.00
3	17		35.00	55.00			3 ton	70.00
4	32	27.37	53.33	20.83	1.44	13.82	4	55.00
5	9	26.43			3.50	14.15		37.50
6	10	37.14	55.30		2.44	16.10		37.50
7		11.67		15.00				50.00
		21.25	45.19	32.51	2.21	12.98	3.5 ton	$50.00
Total acres .		619	214	293	404	113	65	

Estimated losses from normal yield by water shortage.

	Wheat	Oats	Barley	Alfalfa	Beets
1	12.0	20.0			
2	10.0	15.0	10.0	1	2
3		25.0			
4	14.7	28.7	20.83	.77	
5	7	(Serious loss, not estimated)			
6	9.3	13.8			
7	13.33		30.00		1.6
Average loss	11.05	20.5	20.28	.88	1.8
Actual yield	21.25	45.19	32.51	2.21	12.98
Estimate Normal yield ..	32.30	65.69	52.79	3.09	14.78

Quotations from evidence of the various seven farmers giving above statistics:

"I value this land at $50.00 per acre and came to this conclusion as a result of revenue it will produce under normal conditions, regarding price of wheat as established at an average of 75c per bushel."

"An irrigated farm that was properly taken care of and could get a sufficient supply of water ought to be worth $70.00 an acre anywhere. But that sufficient supply of water means a lot."

"The irrigated land with sufficient supply of water and a normal market for all that you produce will pay 6% on $100.00 an acre every year that you can have proper irrigation and proper markets. I think the land in this project should be worth $50.00 to $60.00 an acre with fair improvements on it at the present time."

The Magrath Irrigation District

Question 1: The value of land with water right as determined by the potential possibilities for production of crops and livestock on irrigable land of good quality.

Question 2: The ability of farmers of average attainments in resources, industry, management and agricultural knowledge, to pay for land with water rights, having regard to economic conditions over a period of years.

The situation at Magrath may be briefly stated by quoting portions of a letter submitted as evidence by the chairman of the Board of Trustees. The information there disclosed is in agreement with the statements of individuals at the hearing.

"The district was formed in the year 1926 for the purpose of bringing irrigation water to about 5,000 acres of land, which had not water agreements from the A.R. and I Co. The water supply for the district had to be obtained from that company and the distribution system had to be built. The system was designed on the basis of providing water for a maximum of 40 acres

to each quarter section, and hence was more expensive per acre to construct than a system to supply the same area in a more concentrated form.

"The cost of the water right for the district was $120,000.00 which represented a proportion of the cost of construction of the A.R. and I. canal system. The cost of the construction of the district's own distribution system was $80,000.00 making a total capital cost of $200,000.00.

"The C.P. Railway advanced the money for the construction of the works and accepted district debentures to the amount of $200,000.00 in payment for the water right and the construction cost. In addition to this capital charge, the district was required to pay an annual water rental of 66⅔ cents per irrigable acre, and also had to operate and maintain its own works . .

"To meet operating cost, C.P.R. water rental, and capital charges it became necessary to levy a rate of $5.00 per irrigable acre per anum . .

"With the disastrous drop in prices, the position of the majority of the farmers, in the district, became hopeless. And the district authorities were quite unable to meet debenture payments. Interest charges accumulated and increased the burden. And the settlers soon were in a position where they saw no hope of ever meeting the obligation which they had incurred and consequently lost all heart.

"An adjustment with the C.P.R. was sought, and in 1932 they agreed to consolidate the arrears then owing them and accept additional new debentures to the amount of $50,000.00 in settlement. The debenture indebtedness of the district is, therefore, now $250,000.00 plus very considerable accumulations of arrears of interest since the adjustment.

"The situation has been placed frankly before the Railway Company and we are bound to say that they have offered to go a very long way in forgiving the district a large part of its debenture debt. They maintain, however, that it is only fair that they should be repaid the $50,000.00 which they expended in cash for the cost of construction of the district's irrigation works. We too admit that this is fair. We have no desire to repudiate our debts, but we are in the unfortunate position that we cannot possibly pay them.

"We have the assurance of the Manager of the Department of Natural Resources of the Canadian Pacific Railway Company, that if the company is paid this amount, which is just the original cost of construction, he will recommend the waiving of the balance of their claim entirely for capital charges . . .

"To properly operate and maintain our system in working condition requires an expenditure of at least $1.00 per acre per annum. Our canal water rental to the Company amounts to about 67 cents per acre. It is clear then that operating charges cost very close to what we can afford to pay, and that there is therefore practically no margin for capital charges."

This final statement was based on an assumption that $2.00 per acre per annum was all an irrigated acre could pay from production as the witness endeavored to prove to the Commission.

Questions as to present land values brought forth the response from several witnesses that there weren't any. The lack of ability to meet irrigation payments had jeopardized the title to all of each individual's holdings which in nearly every instance were three acres of dry land to one irrigated. Consequently there were no prospective buyers for any offerings of land for sale. Apparently there were no purchasers who could pay cash, and thus feel secure. A probable purchaser who would ordinarily offer to make a part cash payment would be afraid of the security of title.

It is quite possible that the consecutive years of drought, grasshopper plague and low farm commodity prices which so adversely affected the operations of these

people on the three-quarter area of dry land farming on each parcel that they become progressively, each year, less able to farm properly their irrigated acreage. It has been a combination of unpredictable, unfavorable circumstances that has brought about the present unenviable position of this group of formerly progressive, prosperous farmers.

There was not sufficient evidence in detail to determine average productivity of the land there in recent years. However, we attach a statement of returns per acre collected by a disinterested agent from without the district who was brought in to collect one-eighth of all grain crops grown on both dry and irrigable land on each parcel, and one-eighth of beets up to a total of 100 tons. In any amount over 100 tons produced he collected one-tenth This manner of paying water rates and water right payments was instituted in 1933 and has been in use since.

Year	Amt. Levied	Amt. Paid	
1926	1.00		) No record of collection
1927	3.50		) for these three years
1928	3.50		) presented.
1929	5.00	5.00	Borrowed of Bank for purpose.
1930	5.00	2.60	By farmers)
1931	5.00	2.25	By farmers) Average 1.82.
1932	5.00	.62	By farmers)
1933	5.00	1.30	From ¼ crop share) Average
1934	5.00	1.20	From ⅛ crop share) 1.37
1935	5.00	1.62	From ¼ crop share)

The farmers still owe the district on rates levied $172.064.00 as of December 31st, 1935. The dictrict owes the Bank of Montreal $14,-000.00 and the Canadian Pacific Railway, $288.890.00, totalling $302,-890.00 as of same date. No debenture payments were due until 1929.

If the proposed arrangement for reduction of debenture debt was affected there would be $170,000.00 written off. That would leave a balance of $52,890.00 due the C.P.R. and the Bank plus $80,000.00 borrowed from another source or a total debt of $132,890.00 which amounts to $26.56 per irrigated acre.

Value of Land—Ability to Pay

The Commission considers the productive power of this irrigated land to be equal to any land in any irrigation district in Alberta. It also has a relatively high value as dry land. Therefore, it is comparable to the United District and the westernmost part of the Lethbridge Northern Irrigation district.

Because of the fact that only one-fourth of the quarter section units are irrigated regardless of the total irrigable acres in each unit, we assume that the water is applied to that most suited for it. That land, then, for all practical purposes, in the absence of any governmental classification of these lands, should be assumed to be 100 per cent land.

Therefore we state as our opinion the land and water right should be valued at $28.00 per acre, the water right 4/7 of the total or $16.00 per acre and the land 3/7 of the total or $12 00 per acre.

As to the farmer's ability to pay as measured by production, the records of the past several years are not indicative of what the average production over a term of years would be under normal conditions. It was pointed out previously in this report that the present farming of the irrigated acres on each farm has been inextricably involved in the dry farming efforts on the three-quarter balance of acreage. For reasons enumerated the dry farming effort has been a failure in both crops and money returns or the past six years. Collections of ¼ of the total crops on each farm for the past three years, when averaged as respects the irrigated acres, amounted to only $1.37 per acre.

We believe that the present arrangement to deliver ⅛ of the total crop on each farm will enable the payment of the water rental to the company, the water service charge to the district, and the interest on the valuation of the land, as here set forth, with a reduction of the capital debt rapidly enough to retire it in a reasonable length of time. As the arrangement is peculiar to this district, such a considerable acreage of dry land being involved, it is difficult for us to name a period of time.

However we submit the following to indicate what we consider should be an average income per quarter section under conditions that have obtained: 160 acres, 120 dry, 40 irrigated. By summer fallowing one-half of the dry land yearly and one fourth the irrigated, would leave 60 acres dry land and 30 acres irrigated to be cropped to wheat.

Thus the amount received per irrigated acre would be 1/40 of $128.50—$3.21. This would enable $1.54 to be applied toward debt reduction.

It is very necessary that this district manage to arrange for the debt adjustment previously mentioned in order to remain solvent.

In the evidence given by a very able and reliable farmer a value was given dry land of $25.00 per acre, irrigated land $30.00. He stated that the charge of $5.00 levy each year chargeable against the irrigable land now and henceforth was rapidly putting the farmers in the position of having no equity left in the land itself. The only relief seemed to be the ability of the district to borrow enough money to pay the sum of $89,000.00 proposed by the C.P.R. Co. for liquidation of all debenture debt. This ability appears to be non-existent at the present time. Mortgage companies and banks approached with this object in view refused to consider making such a loan.

⅛ of 60 acres x 12 bu. x 70c or 504.00—$ 63.00.
⅛ of 30 acres x 25 bu. x 70c or 525.00— 65.50.

$128.50.

There was considerable evidence concerning serious shortages of irrigation water during the past five years of drought conditions. This matter has been dealt with elsewhere in this report.

THE RAYMOND IRRIGATION DISTRICT

This district was formed in the same year as the Magrath District, 1926, and under rather similar circumstances. The arrangement of the district with the C.P.R. Co. was for the delivery of a maximum of 40 second feet of water at $4,000.00 per foot spread over 30 years with interest at 6% on deferred payments. At end of the 30-year period, or when this capital cost should have been paid, thenceforth the District would be obligated for an annual water service charge which at present is 83c per acre.

In 1934 the district found itself in rather serious arrears in its debt due the C.P.R. Co. An adjustment was made whereby the terms of payment were made easier with no interest chargeable for the period 1934 to 1940. The company agreed to accept from the district $23 542.34 annually for 20 years which payment was made up of the following sums owing: $5,500.00 payment on principal of debentures, $4,500 00 for water service charge, 1/7 of arrears of debentures $3,340.00, 1/7 of arrears on water service charge $1,-108.02; a total of $14,448.02 applicable to the new irrigation district. But in addition the Raymond district assumes the responsibility of collecting $1.00 per acre water rentals from the original 8,611 acres of A. R and I. land, to which the C P. R. Co. are still delivering water and for which the district is acting as agent in collections. For this service of collecting rates it is allowed a commission. However, they are, under this agreement, obliged to pay $6,458.25 representing the annual water rental due the C.P.R. Co. from this source, and 1/7 of the

arrears owing the company by these original water users in the sum of $2,636.07 annually. Thus the district is, in this way, made responsible for those collections. The sum of these two latter figures is $9,094.32 plus the $14,448.02 above equals $23,542.34, the annual payment due since 1934.

The original issue of debentures was for $165,000.00 payable in $5,-500.00 instalments on principal each year for 30 years. In 1934 the debenture debt had been reduced to $110,000.00 and under the new arrangement the same amount on principal was payable each year for the ensuing 20 years. There is a deferred payment on principal that was then due in the sum of $16.-500.00 which was provided for in the new arrangement and is being paid out at 1/7 amount owing each year.

In fact the secretary said that the account was in good standing at the present time and that all obligations have been met.

The area served by the new water agreement is 13,500 irrigable acres, which, plus the 8,611 acres under A. R. and I. contract, make an irrigable area surrounding Raymond of 22,111 acres.

The rates set by the district for all purposes are at present averaging about $2.00 per acre annually It is the opinion of the management that it will continue at that figure indefinitely. They further stated that original purchase price of land had been paid up in most cases. Original A. R. and I. contract prices were $15.00 per acre for irrigated land in 1903. Dry land was then worth about $6.00 per acre.

The management was of the opinion that facilities for collections of water rates under present provincial laws were satisfactory.

In fact at this largely attended meeting the chief problem appeared to be lack of water for irrigation requirements. Very strong representations were made concerning it. Provision of water storage was urged. General reference to the matter of water shortage is to be found on page 83 of this report.

There appears to be no evidence of present land values submitted. It was a question which did not concern them. Nor were there individual reports of yields. Note: Please see secretary's report in appendix.

Land Values and Ability to Pay

The meeting at Raymond was the first meeting the commission held. The inquiry as previously shown developed into an explanation of the present financial position of the district, which was declared satisfactory, and an explanation of damage done to crops through an inadequate supply of water. Of course a request was made that the Commission use its good influences in helping them to get water storage built into the A.R. and I. system.

It is an old community where irrigation has been in use for many years. The farms are owned by individuals. No organization has any land valuation problem or collection policy to be worked out. Land has a competitive value as there is a demand for it. It is rather highly developed. Pressure of population influences values. They are not determined by the means we find it necessary to adopt in other newer projects.

Therefore, as no evidence was given respecting values in this our first meeting we shall not attempt to deal with that in this report respecting this district. Nor shall we deal with the ability to pay which must come from careful inquiry respecting crops, yields and prices, which inquiry was not made here by this Commission. Nor does the Commission think there is any necessity of making such enquiries.

THE TABER IRRIGATION DISTRICT

History and Economic Status

The information immediately following was obtained from the report of Theodore Sundal, secretary of the district:

The original project of 17,000 acres was constructed in 1920 at a cost of $16.00 per irrigable acre, issuing thirty year 6% bonds for the

sum of $272,000.00. The bond issue covers a period of thirty years, payable interest only the first ten years, amounting to 96 cents per acre, and the principal divided into twenty annual payments of 80 cents per acre.

The Canadian Pacific Railway Company constructed a reservoir in Chin Coulee to store the tail-end waste waters from their Coaldale projects. An agreement was negotiated with the C.P.R. to purchase 34,000 acre feet annually from this reservoir, to be delivered to the Taber project headgates, at a cost of 50 cents per acre It was also arranged with the C.P.R. to supervise and finance the construction of the project, and they agreed to accept the bonds at par.

During the first nine year interest paying period, the average annual assessments amounted to $1.81 per irrigable acre, covering $1.46 for interest and water delivery from reservoir, and 35 cents for local operation and maintenance costs.

In 1929 an additional area of 4,661 acres was added to the project boundaries, and the ditching costs to serve the new area, was financed from the sale of abandoned school lands which were purchased by the local board of trustees from the federal government. As it was not necessary to issue bonds for the extension costs, the inclusion of the new area automatically reduced the bonded liability from $16.00 to $12.69 per acre.

The first instalment on bond principal was due and paid in 1929, and the second instalment paid in 1930. During the depression years and low farm commodity prices up to the end of 1935, it was necessary to pass-up principal payments, but the interest and other operating charges were regularly paid. The average assessments for the past seven year period from 1929, amounted to $2.30 per acre, with a peak of $2.60 in 1929, and down to $2.10 in 1935.

There are 314 assessed parcels in the project, an average of 68.4 irrigable acres per farm unit. During the 17-year operating period, four parcels defaulted under irrigation rate sales prior to 1930, and 10 parcels since the depression.

The current year cash collections from 1920 to the end of 1929, averaged 33%, and the balance was paid at the conclusion of one year. During this early period the project was new and fairly free from the weed menace, and the crop production sold at good values, as a result of the industrial expansion which followed the great war. In the depression years, the current cash collections dropped to an average of 18[illegible]% and approximately two-thirds of the parcels are annually carried into arrears, which in some cases extend to a period of five years

Average production in the Taber Irrigation District from report of Ted Sundal, secretary-manager, 1925-1930, covering all land parcels for the period is as follows: alfalfa 2.2 tons, timothy 1.16 tons, green feed 1 16 tons, spring wheat 20 76 bu., oats 31.72 bu., barley 23.7 bu., sugar beets 8.51 tons, potatoes 3.98 tons, per acre.

Mr. Sundal further states: "In analysing consecutive reports and finding the average yields so discouragingly low, and with subsequent depression prices with wheat at 30 cents and oats at 20 cents, it was decided in 1931 to discontinue the work and expense of collecting census reports."

"The cross-section of the 1925-30 report is a reliable estimate for the next five year period ending in 1935, with the exception of a substantial gain in sugar beet production".

Note: Please see brief by Mr. Sundal in appendix.

Wm. Valgardson: Trustee of the Taber Irrigation district since it was organized. He owned 80 acres on gravel highway for some years and just finished paying for it $60 per acre. He just bought another 80 acres adjoining with no improvements on it at an agreed price of

$60.00 per acre, date of purchase being the spring of 1936. He has been acting as field superintendent of the sugar company there for the past ten years. He states: "I find (in my capacity as field superintendent) where they are growing good crops of sugar beets they have it much easier making payments . . . "Now take this foreign element, foreign people, European people bought this land, we (the district) sold in 1929 in the Jamieson district and are adopting the system of living within themselves. They do their work and grow as much as they can and wouldn't spend very much until they got on their feet. Naturally they are making a real success. I think their beets will average pretty near 15 tons to the acre. Now that is through good farming, staying at home and taking care of the crops when they should be".

Mr. Sundal in reference to parcels sold in 1929 just mentioned above, said, "In 1929 the district sold 19 quarter sections at public sale that averaged $35.00 per acre, and 25 eighty acre parcels that averaged $32.12, and 22 smaller parcels mostly 10 or 15 acres, averaged $49.63. These were mostly unimproved land.

Another member of the board of trustees said that he had bought land for $50.00 per acre and also that he had paid for an 80 acre irrigated farm out of net revenues from that farm over a number of years. He has improved it and now values it at $50.00 per acre. He said that $35.00 per acre would represent its investment value. A third member of the same board made representations to the affect that the total balance of the bonded indebtedness must be repudiated.

There is a market for lands in this district and actual sales have been made at prices considerably higher than any values which this commission could reasonably fix. The bonded indebtedness of the district is equal to $12.59 per acre. Any value which the Commission might fix would necessarily be much in excess of this sum. In fact, the water right alone is in our opinion worth considerably more than $12.59 per acre. The district is highly developed and the question of land values is not a public problem with the people living there. The commission is therefore of opinion that no useful purpose could be served by endeavoring to fix the values of farm lands in that district.

THE LITTLE BOW IRRIGATION DISTRICT

This is an irrigation district without irrigation.

"A good many years ago, in order to provide a steady water supply through the summer months for all the settlers along or near the river, the government of the North West Territories took out a license from the Dominion government, who control irrigation matters, to divert a considerable amount of water down from the Highwood River into the Valley of the Little Bow river. This was done at the expense of the government of the North West Territories.

"About 1922 a good many of the farmers in that valley conceived the idea that it would be advantageous to pump water from the river and irrigate the flats along the valley of the river, chiefly with the idea of growing feed for stock. They were going into it on the basis of each man putting in his own pumping plant, but in order that there might be a supply from which to pump, they had to be assured of a steady flow of water in the river.

The district was formed, a much more permanent diversion works than had ever existed before were constructed and the necessary canal to carry the water past the town of High River into the Little Bow The cost of these works was about $44,000.00 of which the provincial government contributed a grant of $18,000.00. The balance of the cost viz. $26,000.00 was raised by issuing debentures of the district secured by the various lands that were within it. These debentures were fully guaranteed by the provincial government. They mature in 1937

The district has not made any use of the water by pumping for irrigation purposes. It is considerably in debt to the province on account of payments that have been made, by the government, in behalf of the district under the provisions of its guarantee. This debt is about $10,000.00.

To date the district has taken title to 45 quarter sections, by rate enforcement proceedings, out of a total of 73 quarters comprising the district. These quarters have families living on them. None have as yet been dispossessed. Many were original homesteaders there. Only 13 rate payers are at present in good standing as regards meeting their obligations to the district. They represent 23 quarters. There have been no crops grown in the district for several years in succession due to drought.

"The land owners in the district have attempted to do their best. But they got into arrears to provide this flow of water down the river. And it has been of no particular advantage to them as against the other people who are also living along the river, except that they give them the right to take advantage of it".

The declaration was made that the supply of water in the river was necessary for farming operations in respect of water for stock and a water supply for domestic use The village of Carmangay is dependent on the river for its water supply. It was pointed out that the fact that the government had previously accepted the responsibility of diverting water into that river was evidence that it was an essential undertaking. It supplied water the length of the valley being about 100 miles.

The previous diversion structures that the government had put in were frequently washing out and had been replaced from time to time. No proper diversion had been made until this district had undertaken it. Engineers agree that the headgate and canal are excellent works and are in good condition"

The irrigable area is 2,805 acres. The total area of the district is 11,680 acres. So the people are in a position now of losing their farms, through an ill advised, impractical attempt to irrigate 24% of their total acreage—which never has as yet been irrigated. They obligated themselves to deliver water to all the settlers for a hundred miles along the Little Bow River for all time at an annual cost to themselves of $600.00 a year in return for a government grant of $18,000.00 toward the construction of the works which they built at a cost of $26,000.00 to themselves and the obligation to maintain them. This was secured by a debenture mortgage on all of their lands and homes.

They ask the provincial government for relief from their debt and the restoration of title to their lands.

The chairman of the board of trustees said:

"We are still willing to hold that right (to divert the water for the irrigation purposes) and still pay the carrying charges. We don't want to lose that right to the river."

The chairman of the commission, "Then your proposal is this: That some government assume the fifteen thousand dollars, and in return for that you will give them the right to levy rates on any land which in the future will be brought under irrigation, if any of it is brought under irrigation. Is that it?" Answer: "Yes."

Question 8: A general policy of procedure in the best interests of irrigation development.

I

Under this heading we think it wise to deal with a question which was brought up in an acute form at several meetings. At the hearings held in Magrath, Raymond, Lethbridge and Coaldale there was a great mass of evidence dealing with the subject of seasonal water shortage. The representations were so

urgent as to need of relief by provision of storage that the commission feel it obligatory to set forth briefly the situation.

This A. R. and I. block was the pioneer irrigation development of great size in Alberta. Construction started in 1899 and by 1902 it was delivering water taken from the St. Mary's river at Kimball, just north of the International boundary and delivering it to farms in the areas about the above named towns in the order mentioned. In all 111,472 acres at the present time are served by this system. However, since the original area of 73,546 acres was served additional areas were added in 1925 at Magrath 4,955 acres. Raymond 13,500 and Taber 19,471, totalling 37,926 acres, which is approximately a fifty per cent. increase of the original area. These three areas added are not administered by the C.P.R. Co. They were organized under the Irrigation District act as separate units to which the C.P.R. Co. delivers water at a stipulated price.

In addition to the area now being served there are 26,434 acres in the A. R. and I. block and 2,026 in the Taber District, that are irrigable but for which no water right has been sold. So in case of full delivery being made to all the irrigable acres the total area would be 139,954 acres.

Now this is an immense area of fertile land, well settled, surrounding towns of good size and the city of Lethbridge in almost the geographical center of it. It is well served by the Canadian Pacific Railway Company and by improved highways. The Raymond factory of the Canadian Sugar Factories Limited receives beets grown on this project. It is an important livestock finishing district. Potatoes are grown in great quantities for shipment to all parts of Canada. Bee culture is commercialized. Dairying is extensively engaged in. In fact it is undoubtedly the best developed irrigation enterprise at the present time in Alberta.

However, it is not able to realize to the fullest extent the benefits ordinarily expected to result from the practise of irrigation farming because of frequent lack of water during the critical period in the hot months of July and August. That fact is not denied by any one conversant with the situation. It has come about because of the following facts:

Previous to the construction of the system engineers of the department of the interior reclamation branch had assembled data as to the flow of water in the St. Mary's river. Computations were made as to the total amount of the flow during the months that water was deliverable to the land and from that the number of acres that could be properly served by that water was arrived at. And subsequently the A. R. and I Co. were given a federal license to construct the system upon plans approved by that department of the Dominion government.

Then the advent of irrigation in Alberta was advertised by both the Dominion government and the railway company to the world. Land was sold to settlers who rather quickly populated the project. The company dealt fairly and courteously with the people on the land, kept the works in good condition, apportioned the water equitably and encouraged and advised the settlers in the use of the water.

In entering contractual relationship with the land purchasers the irrigation company agreed to deliver a certain number of acre feet of water annually up to a certain maximum, the actual delivery to be according to the flow of the river apportioned as it represented a fraction of that maximum delivery. In other words, it was not selling so much water but was selling a service in taking the water, available to irrigation, from the river and delivering it to the farm.

Evidence was that in the earlier years there seemed to be enough water to supply the original area. But as time went on greater use

was made of the water especially so after the establishment of the sugar beet industry. That was a crop demanding an assured amount of water. Failure to have it applied meant greatly diminished yields and great monetary loss to the farmer who had an outlay of about $40.00 per acre, in money, that has to be repaid before he can begin to realize any profit. Then too, the effective and proper use of water resulted in such an increase in yield and net money returns, demonstrated by the better farmers, that by such examples water users generally in this district have come to a realization of true value in its use and are consequently making fullest use possible of their allotment. That in the aggregate requires delivery of much more water than was used in the first 15 or 20 years history of development.

Now since the enlargement of the area to which water is delivered by about 50% in 1926, which enlargement was again approved and authorized by the department of the interior upon investigation and recommendation of their engineers, it has become apparent that there is a serious lack of water delivered part of some seasons that results in heavy curtailment of yield. It is claimed that if spring flood water, that ordinarily goes to waste, was stored near the headgates of the canals or deliverable some place into the canals from a storage reservoir that there would be a considerable increase in yields due to its delivery to the land in the hot and usually dry weeks of the summer.

So it is plain that this irrigation block, while that in name is scarcely that in fact in those very seasons when irrigation water is most needed.

The contention of the water users is that while the railway company is performing its services as agreed and probably not legally responsible for lack of water delivery when there is no water, it is nevertheless morally responsible to the extent that it should try to alleviate the situation in an effort to provide storage with the help of the governments who too have a considerable responsibility therein. The people who settled on these lands relied upon the authority given by the federal government to proceed with the construction of this system, on the advice of its engineers, as evidence that they always would receive sufficient water. They had confidence that they would receive sufficient water, at the right time for irrigation purposes. That confidence helped to establish land values and contributed to the rapid settlement and improvement of the lands. Now they find themselves in difficulty and ask that the governments and the C.P.R. Co. in some manner and at an early date take steps to provide this very necessary water storage.

The commission recognizes that the problem is an engineering and financial problem. The members of the Commission in travelling through these various irrigation districts were met frequently by the complaint that the yields were seriously diminished because water in sufficient quantity was not available when needed. The result is very serious to those depending on irrigation and the Commission is of opinion that it would fail in its duty if it did not call this situation to the attention of those who may have some responsibility in the matter.

In the next place the Commission have become aware of the perilous financial conditions in which some of these projects find themselves. We think it would be unfortunate if any of these districts were allowed to drift into positions where they would cease to operate.

If left without water the occupants on the lands now irrigated would have to abandon them. These farmers would have to be otherwise placed. Industries have grown up dependent upon irrigation such as sugar factories, canning industries and live stock on the range country. These important industries could not subsist if irrigation

ceased. Then there are many indirect but very real benefits which accrue from irrigation to the public at large, to various communities and to many public and private interests.

After a careful review of the whole situation the Commission is of opinion that governments as well as all others interested should see to it that in some way and under such terms and conditions as may be just the projects should all be kept in operation.

The Commission heard much detailed evidence which could not conveniently be placed in the body of this report. We think, however, that some of this evidence should be readily available. With this purpose in view we have attached fourteen appendices dealing with various matters connected with irrigation.

Lastly the Commission desires to recognize the valuable services rendered by Mr. J. W McClung, K.C., counsel for the Commission

Attached hereto are the following:

1. The evidence taken by the Commission.

2. Exhibits filed at the various hearings.

3. Report of the Commission in duplicate.

4. Commission dated the day of 1936.

Dated at Edmonton this day of March, 1937.

A. R. EWING

Chairman.

F. A. WYATT

Commissioner.

ROI W. RISINGER

Commissioner.

LIST OF APPENDICES

LETHBRIDGE NORTHERN IRRIGATION DISTRICT

A. Table of crop yields, farmers' evidence Lethbridge Northern.

B. Mr. Eisenhauer's brief.

C. Letter by Messrs. Sutton, Eisenhauer and Sauder.

D. Table of yields, and values of crops, Dr. Fairfield.

E. Plan of repayment. Brief by Mr. Sutton.

UNITED IRRIGATION DISTRICT

F. Secretary's brief. Yields and data.

CANADA LAND AND IRRIGATON COMPANY

G. Memorandum by D. W. Hays, general manager.

H. Statement of Commission re evidence of company officials.

I. Statement of Commission re evidence of the contract holders.

J. Financial statement of the company.

K. Field costs, maintenance and service.

L. Table of acreages, yields, receipts, etc.

TABER IRRIGATION DISTRICT

M. Brief by the secretary.

Section 8

N. Report of Mr. Walter E. Packard, C.E., re incidence of benefits of irrigation.